

JOB COMPLETION REPORT
SURVEYS AND INVESTIGATIONS PROJECTS
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ILLINOIS

Federal Aid Project No. W-49-R(29)
Study XII: Raccoon Investigations
Job No. 5: Cooperative raccoon collections

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PROJECT NO.: W-49-R-29

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ABSTRACT: Raccoons were examined and data collected at Perardi Bros. Fur and Wool, Inc., Farmington, Fulton County, Illinois, as they have been for the past 26 seasons. Five trips were made to the furhouse and 457 raccoons examined. Most of the data collected fell within the range of data collected at the same furhouse beginning with the 1955-56 season. In 1981-82 young-of-the-year females comprised only 56.82% of the females examined; the lowest percentage found in the 27-year period. This percentage appeared to be low because of a higher than average number of parous females in the sample in 1981-82--35.45%, the second highest for the 27 years of the study. The high number of parous females caused the number of young raccoons (of both sexes) per parous female to be the lowest found in the 27 years--3.62 in 1981-82 compared with the 27-year average of 5.18. Other results of the large number of parous females were the second lowest percentage of young-of-the-year animals among all raccoons--61.71% compared with the 27-year average of 67.94%--and the third highest average body weight of all female raccoons--12.30 lb compared with the 27-year average of 11.64 lb. Juvenile, parous, and nulliparous adult females had average weights that were higher than the average weights of the 27 seasons. Weights of young-of-the-year males for 1981-82 were virtually the same as the 27-year average weight, whereas weights of adult males, all males, and all raccoons

were slightly higher than the 27-year mean weights. If the data collected are indices to major changes in the population, they do not indicate such changes in the raccoon population in west central Illinois. However, these data probably would not reflect a major change in the population until the year after the change occurred. The harvest in 1981-82 increased only 0.06% from that for 1980-81, and the harvest in 1981-82 was the second highest in recent years. Thus, Illinois raccoon populations have not declined drastically as some verbal reports from hunters, trappers, and furbuyers have suggested. Although young-of-the-year raccoons comprised only 61.71% of the raccoons examined in 1981-82 and there were only 3.62 young per parous female, females comprised 48.14% of the harvest, and the mean litter size for the 1981 breeding season was 3.59. The average litter size for 1981 was essentially the same as the 27-year average. Adult males comprised 33.76% of the male harvest in 1981-82, less than 3% above the 27-year average. Thus, it appears that the increased percentage of parous females was a chance occurrence rather than an indication of increased harvest of the total population. Juvenile males averaged 11.25 pounds and juvenile females 10.61 pounds. Adult males weighed an average of 16.97, parous adult females 14.53, and nulliparous adult females 14.52 pounds. Weights vary as much as 1.5 pounds from one year to the next but have shown no trends during the past 27 seasons. Hunters harvested 73.85% and trappers 25.71% of the raccoons examined. Salvaged raccoons killed on roads comprised the remaining 0.44%.

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OBJECTIVE: To collect data on the sex, age, weights, productivity, and condition of raccoons harvested in west-central Illinois.

PROCEDURES: Every other week during the raccoon hunting and trapping season a large furhouse (Perardi Bros. Fur and Wool, Inc., Farmington, Fulton County, Illinois) was visited and data were collected on 100 raccoons brought in by hunters and trappers. Most of the raccoons were caught within 100 miles of Farmington; however, the exact locations of capture were unknown. Animals were selected at random and data collected before and after the raccoons were skinned by employees of the furhouse. The data collected at the furhouse included body weight (nearest 0.1 lb), body length (nearest 5 mm), sex, how caught (hunter, trapper, or killed on road), condition of nipples for females, condition of penis for males, general health (animals with distemper were noted), and toes missing from previous encounters with traps. Specimens collected included one front leg (halfway between the wrist and elbow), penis bone from males, one testis and epididymis from each male, and the uterus and ovaries from each female. In the laboratory the epiphyses and bacula were examined--with other recorded information--to determine age, one testis was weighed, two ovaries were weighed, each epididymis was examined for the presence of sperm, and each uterus was examined and the number of placental scars counted. All information was recorded in standardized data sheets in a notebook.

Similar data have been collected at this same furhouse beginning with the 1955-56 season. The data for the entire period have been placed on floppy discs and tape, and, as time permits, programs will be written, data analyzed, reports written, and manuscripts prepared. Each year the data will be summarized in a series of tables and a figure (Tables 1-9, Fig. 1) and presented with the data for the previous years (back to the 1955-56 season). During the past year two manuscripts were published (Junge and Sanderson 1982 and Sanderson and Hubert 1981).

Small differences--when they occur--in the data in the Tables from similar data presented in previous years are a result of placing the data on discs and tabulating the data by computer instead of by hand. A few corrections in interpretation of the data were made before entering them on the discs. Other minor differences result from rounding errors and from errors made by hand tabulation.

The raccoon hunting and trapping seasons were the same in 1981-82 as in 1980-81. The hunting season in the Northern Zone was 15 November 1981 - 13 January 1982. The hunting season in the Southern Zone was 25 November 1981 - 23 January 1982. The raccoon trapping season in the Northern Zone was 15 November 1981 - 19 December 1981. The raccoon trapping season in the Southern Zone was 25 November 1981 - 8 January 1982.

FINDINGS AND ANALYSIS:

1981-82 Hunting and Trapping Season

During 5 trips to the furhouse between 30 November 1981 and 11 January 1982, 457 raccoons were examined. Most of the data collected fell within the range of similar data collected from the 1955-56 season through the 1980-81 season; however, the percentage of young-of-the-year females was the lowest (56.82%) it has been during the 27 years of this study (Table 1). The average for the 27 years of the study is 66.74% young-of-the-year. Young-of-the-year females comprised 44.33% of all young examined; a figure that was only 2.55% below the 27-year average and well within the range of previous years. Parous females comprised 35.45% of the female harvest; the second highest percentage in the 27 years of this study. Thus, it appears that the relatively low percentage of young-of-the-year females was caused by a higher than usual percentage of parous females and not by a reduction in the number of young females. Most of the increase in parous females came from the sample examined on 11 January 1982. On that date 44.90% of 49 females examined were parous compared with 30.30% of 33 females examined on 12 January 1981. Although adult males comprised 33.76% of the males examined in 1981-82 (Table 2), this figure was only 2.8% above the 27-year mean and was within the range of percentages for previous years. Thus, even though the number of young per parous female (3.62, Table 1) was lower in 1981-82 than in any of the previous 26 seasons, the low figure appears to be a result of the higher than average number of parous females examined rather than to increased pressure on the population causing additional adults of both sexes to be taken by hunters and trappers. The overall sex ratio (48.14% females) was essentially the same as the 27-year average, 48.12% (Table 3). Also, the average litter size (3.59) was essentially the same as the 27-year average, 3.56 (Table 4).

Mean body weight of juvenile males in 1981-82 was 11.25 lb (Table 5) compared with 10.56 lb in 1980-81 and the 27-year average of 11.28 lb. Other than the third highest mean weights for all females and the second highest weights for nulliparous adult females found in 1981-82, all other data showed no substantial differences from the 27-year averages. Thus, if these data are indicies to population changes--such as overharvest--they do not indicate major changes in the raccoon populations in west central Illinois. If, however, an overharvest occurred during the 1981-82 season, data such as these probably would not reflect the change until the 1982-83 season.

Harvest figures for the 1981-82 season (Table 7) were 0.06% higher than for the 1980-81 season, but the hunting season in the Northern Zone in Illinois in 1981-82 was 7 days (10.1%) shorter than it was in 1980-81, and the trapping season was 24 days (34.8%) shorter. Also, the harvest in 1980-81 was the third highest reported in recent years (Table 7). Thus, it seems apparent that an overharvest of Illinois raccoons did not occur in 1980-81.

Age Composition

Young-of-the-year animals comprised 56.82% of the females examined (Table 1). This figure was a substantial decrease over the 68.14% seen in 1980-81, and was the lowest percentage found in the past 27 seasons. Parous adults comprised 35.45% of the females, a 11.11% increase over the 24.34% observed in 1980-81, and 7.88% above the 27-year mean of 27.57%. Nulliparous adults (7.73%) were higher than the 27-year average of 5.68%.

Young-of-the-year males (66.24%) were only slightly lower than in 1980-81 and were 2.80% below the 27-year (69.04%) average (Table 2). Of the 457 raccoons examined for age, 61.71% were young-of-the-year animals; somewhat lower than the 68.39% observed in 1980-81 and 6.23% lower than the 27-year average of 67.94%. There were 3.62 young-of-the-year per parous female among the raccoons examined during the 1981-82 season. The 27-year average was 5.18

young per parous female. The number of young per parous female in 1981-82 was the lowest found during the 27 years of this study. This low ratio was apparently a result of higher than average number of parous females examined and not because of a decrease in the number of young produced per parous female (Table 4). These figures do not represent the number of young animals per parous female in the population because young animals are more vulnerable than adults to hunters and trappers. Note that the 27-year average of dark placental scars per uterus--believed to represent the average litter size--was 3.56 (Table 4).

Sex Ratios

Females comprised 48.14% (Table 3) of the raccoons examined at Perardi Bros. Fur and Wool, Inc., during the 1981-82 season. This was a slight increase from 46.69% in 1980-81 and was essentially the same as the 27-year average (48.12%). Of the 282 young-of-the-year raccoons examined in 1981-82, 44.33% were females (Table 1); a figure 2.55% below the 27-year average of 46.88%. Females comprised 54.28% of the adult raccoons examined during the past season (Table 2); a figure that is 4.79% higher than the 27-year average of 49.49%.

Placental Scars

Some of my earlier work has shown that placental scars persist longer in the wild than they do in captivity. Thus, the significance of a group of pale and a group of dark placental scars in the same uterus in a wild female is not clear. They may represent two litters in one year (when the first litter is resorbed or lost at or near birth) or the pale scars may represent litters from the previous year. It seems reasonably clear that groups of single scars in a uterus and the groups of dark scars--when two groups of scars are present--represent the number of embryos implanted during the most recent breeding season (average litter size).

The mean litter size for the 1981 breeding season, as determined from single groups of scars and dark groups of placental scars when pale and dark groups were both present, was 3.59 (Table 4, Fig. 1). The 27-year average litter size determined in this manner was 3.56. If all visible scars in each uterus were combined, the average number of scars per uterus with 1 or more scars was 4.59 in 1981-82 (Table 4) and the 27-year mean was 4.35.

Body Weight

Weights of raccoons examined in west-central Illinois during the past 27 seasons have varied as much as 2.84 lb from year to year depending on age and sex (Tables 5 and 6); however, annual variation is usually less than 1.0 lb and the weights have shown no trends. It seems that the annual variations in body weights are largely caused by weather conditions. Unusually mild weather during January will result in a proportionately larger number of raccoons caught during this month when the average weights are lower than they are in November and December. Also, unusually cold weather in December will result in less daily feeding by raccoons and an increased loss of weight.

Young-of-the-year males weighed an average of 11.25 lb (Table 5) compared with 10.61 lb for young-of-the-year females (Table 6). Adult males averaged 16.97 lb (Table 5), parous females 14.53 lb, and nulliparous adult females 14.52 lb (Table 6). The 27-season averages were: young-of-the-year males, 11.28 lb; adult males, 16.48 lb; young-of-the-year females 10.52 lb; parous females, 14.09 lb; and nulliparous adult females, 12.92 lb. The average weight for all raccoons is of little or no significance because it varies according to the number in each age and sex group in the total sample.

All sex and age classes, except young-of-the-year males, averaged heavier in 1981-82 than their 27-season average weights (Tables 5 and 6). All sex and age classes except nulliparous females had higher average weights in

1981-82 than in 1980-81. The sample sizes for nulliparous females were small for both seasons. These differences can probably be explained by the relatively mild weather during the 1980-81 hunting and trapping season, compared with the more severe weather in 1981-82.

Juvenile males killed by hunters weighed an average of 11.41 lb compared with 10.79 lb for juvenile males killed by trappers (Table 8). Adult males taken by hunters averaged 17.05 lb and those taken by trappers 17.37 lb. Juvenile females from hunters averaged 10.69 lb and from trappers 10.55 lb. Parous females killed by hunters weighed an average of 14.50 lb each and those killed by trappers 14.57 lb. During 9 recent seasons, 3,221 raccoons killed by hunters weighed an average of 12.29 lb each compared with 11.89 lb for 920 raccoons killed by trappers (Table 8). A preliminary analysis of the data for 5 recent seasons (not including 1978-79 - 1981-82) indicates no significant differences between raccoons taken by hunters and those taken by trappers.

Harvest by Hunters and Trappers

Hunters took 73.85% and trappers 25.71% of the raccoons examined; raccoons killed by cars comprised the remaining 0.44%. During 9 recent seasons, hunters accounted for 76.59% and trappers for 22.02% of the raccoons and cars for 1.51%. There were few differences in the various age and sex groups. Cars accounted for 1.69% of the juvenile females, 1.44% of the juvenile males, 1.26% of the adult males, and 0.88% of the parous females. No nulliparous adult females were killed by cars and brought to the furhouse (Table 9).

Although the data have not been analyzed, it appears that with the recent increases in pelt values (Table 7), hunters may be accounting for a slightly increased percentage of the raccoons sold. For example, in 1972-73 and 1974-75, when the average pelt value was \$6.70, hunters, trappers, and cars, respectively, accounted for 71.8, 26.6, and 1.6% of the raccoons examined, whereas in 1978-79, 1979-80, and 1980-81, when the average pelt value was \$24.05, the same groups accounted for 76.6, 21.2, and 1.5%, respectively.

RECOMMENDATIONS:

The study should continue to allow for completion of the analysis of the data collected during the past 27 seasons and to collect additional data so that comparisons can be made with similar data from northern and southern Illinois.

DATA AND REPORTS:

Original data and related reports in this investigation are on file in the Section of Wildlife Research, Illinois Natural History Survey, Natural Resources Building, Champaign, Illinois 61820.

The data for the 1955-56 through the 1981-82 seasons have been placed on discs and tape so that the data can be analyzed by computer, when the programs have been written.

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Table 1. Age composition of female raccoons examined at Perardi Bros. Fur and Wool Co., Inc., Farmington, Fulton County, Illinois.

Season	Young-of-the-year (percent)	Parous Adults (percent)	Nulliparous Adults (%)	Young-of-the-year (percent females)	Yg/Parous F
1955-56	58.14 (25) ^a	41.86 (18)	(0)	32.50 (77)	4.28
1956-57	62.77 (86)	29.20 (40)	8.03 (11)	39.63 (217)	5.42
1957-58	71.91 (64)	24.72 (22)	3.37 (3)	49.23 (130)	5.91
1958-59	78.22 (97)	18.55 (23)	3.22 (4)	46.63 (208)	9.04
1959-60	67.30 (142)	27.49 (58)	5.21 (11)	47.02 (302)	5.21
1960-61	67.42 (178)	31.44 (83)	1.14 (3)	51.90 (343)	4.13
1961-62	66.67 (240)	28.33 (102)	5.00 (18)	48.19 (498)	4.88
1962-63	66.07 (294)	29.21 (130)	4.72 (21)	44.75 (657)	5.05
1963-64	63.72 (72)	28.32 (32)	7.96 (9)	49.66 (145)	4.53
1964-65	70.52 (177)	23.50 (59)	5.98 (15)	49.86 (355)	6.02
1965-66	64.28 (180)	32.86 (92)	2.86 (8)	49.59 (363)	3.94
1966-67	75.00 (108)	19.44 (28)	5.56 (8)	50.70 (213)	7.61
1967-68	67.57 (125)	26.49 (49)	5.94 (11)	45.13 (277)	5.65
1968-69	64.54 (162)	31.88 (80)	3.58 (9)	47.23 (343)	4.29
1969-70	65.16 (159)	27.87 (68)	6.97 (17)	42.86 (371)	5.46
1970-71	71.08 (177)	21.69 (54)	7.23 (18)	46.34 (382)	7.07
1971-72	67.03 (122)	24.72 (45)	8.24 (15)	46.21 (264)	5.87
1972-73	62.63 (181)	31.14 (90)	6.23 (18)	48.92 (370)	4.11
1973-74	60.45 (133)	32.73 (72)	6.82 (15)	38.33 (347)	4.82
1974-75	63.16 (180)	30.88 (88)	6.95 (17)	48.13 (374)	4.25
1975-76	70.26 (137)	23.08 (45)	6.67 (13)	45.82 (299)	6.64
1976-77	70.29 (168)	25.10 (60)	4.60 (11)	47.19 (356)	5.93
1977-78	78.83 (189)	19.14 (49)	7.03 (18)	49.09 (385)	7.86
1978-79	63.11 (154)	25.41 (62)	11.48 (28)	49.68 (310)	5.00
1979-80	69.14 (177)	28.52 (73)	2.34 (6)	51.60 (343)	4.70
1980-81	68.14 (154)	24.34 (55)	7.52 (17)	46.52 (331)	6.02
1981-82	56.82 (125)	35.45 (78)	7.73 (17)	44.33 (282)	3.62
Total or 27-yr Mean	66.74 (4,006)	27.57 (1,655)	5.68 (341)	46.88 (8,543)	5.18

^a Numbers in parentheses indicate sample sizes.

Table 2. Age composition of raccoons examined at Perardi Bros. Fur and Wool Co., Inc., Farmington, Fulton County, Illinois.

Season	Males		All Raccoons Young-of-the- year (%)	Percentage of adults that are females
	Young-of-the- year (%)	Adults (%)		
1955-56	71.23 (52) ^a	28.77 (21)	66.38 (116)	46.15 (39)
1956-57	68.23 (131)	31.77 (61)	65.96 (329)	45.54 (112)
1957-58	75.86 (66)	24.14 (21)	73.86 (176)	54.35 (46)
1958-59	68.94 (111)	31.06 (50)	72.98 (285)	35.06 (77)
1959-60	73.06 (160)	26.94 (59)	70.23 (430)	53.91 (128)
1960-61	62.74 (165)	37.26 (98)	65.08 (527)	46.74 (184)
1961-62	62.77 (258)	37.22 (153)	64.59 (771)	43.96 (273)
1962-63	73.33 (363)	26.67 (132)	69.89 (940)	53.36 (283)
1963-64	58.87 (73)	41.13 (51)	61.18 (237)	44.57 (92)
1964-65	74.17 (178)	25.83 (62)	72.30 (491)	54.41 (136)
1965-66	62.24 (183)	37.76 (111)	63.24 (574)	47.39 (211)
1966-67	65.62 (105)	34.38 (55)	70.06 (304)	39.56 (91)
1967-68	69.72 (152)	30.28 (66)	68.73 (403)	47.62 (126)
1968-69	69.35 (181)	30.65 (80)	66.99 (512)	52.66 (169)
1969-70	72.60 (212)	27.40 (80)	69.22 (536)	51.52 (165)
1970-71	77.07 (205)	22.93 (61)	74.17 (515)	54.14 (133)
1971-72	73.20 (142)	26.80 (52)	70.21 (376)	53.57 (112)
1972-73	66.08 (189)	33.92 (97)	64.35 (575)	52.68 (205)
1973-74	73.79 (214)	26.21 (76)	68.04 (510)	53.87 (163)
1974-75	64.67 (194)	35.33 (106)	63.93 (585)	49.76 (211)
1975-76	72.32 (162)	27.68 (62)	71.36 (419)	48.33 (120)
1976-77	70.68 (188)	29.32 (78)	70.50 (505)	47.65 (149)
1977-78	68.29 (196)	31.70 (91)	70.90 (543)	42.41 (158)
1978-79	68.42 (156)	31.58 (72)	65.68 (472)	55.55 (162)
1979-80	68.03 (166)	31.97 (78)	68.60 (500)	50.32 (157)
1980-81	68.60 (177)	31.40 (81)	68.39 (484)	52.94 (153)
1981-82	66.24 (157)	33.76 (80)	61.71 (457)	54.28 (175)
Total or 27-yr Mean	69.04 (4,537)	30.96 (2,034)	67.94 (12,573)	49.49 (4,030)

^a Numbers in parentheses indicate sample sizes.

Table 3. Sex ratios of raccoons examined at Perardi Bros. Fur and Wool Co., Inc., Farmington, Fulton County, Illinois.

Season	Number Females	Number Males	Percent Females
1955-56	54	73	42.52
1956-57	145	192	43.03
1957-58	89	87	50.57
1958-59	126	161	43.90
1959-60	211	219	49.07
1960-61	269	263	50.56
1961-62	364	411	46.97
1962-63	448	495	47.51
1963-64	125	124	50.20
1964-65	251	240	51.12
1965-66	281	294	48.87
1966-67	145	160	47.54
1967-68	193	218	46.96
1968-69	255	261	49.42
1969-70	263	292	47.39
1970-71	249	266	48.35
1971-72	182	194	48.40
1972-73	289	286	50.26
1973-74	222	290	43.36
1974-75	290	300	49.15
1975-76	195	224	46.54
1976-77	239	266	47.33
1977-78	256	287	47.15
1978-79	244	228	51.69
1979-80	244	256	51.20
1980-81	226	258	46.69
1981-82	220	237	48.14
Total or 27-yr Mean	6,087	6,562	48.12

Table 4. Placental scars in raccoon uteri collected at Perardi Bros. Fur and Wool Co., Inc., Farmington, Fulton County, Illinois.

Season	Number of Parous Uteri	No. Groups of Scars		Total Number of Scars		Mean Litter Size		Mean No. Visible Scars/ Uterus
		Pale ^a	Dark ^b	Pale	Dark	Pale	Dark	
1955-56	16	1	16	2	58	2.00	3.62	3.75
1956-57	29	4	29	9	103	2.25	3.55	3.86
1957-58	18	7	18	18	71	2.57	3.94	4.94
1958-59	23	10	23	31	80	3.10	3.48	4.83
1959-60	57	25	57	50	204	2.00	3.58	4.46
1960-61	77	33	77	87	250	2.64	3.25	4.33
1961-62	74	26	74	59	265	2.27	3.58	4.38
1962-63	122	41	122	108	409	2.63	3.35	4.24
1963-64	31	11	31	25	98	2.27	3.16	3.97
1964-65	56	21	56	52	197	2.48	3.52	4.45
1965-66	81	26	81	81	303	3.12	3.74	4.74
1966-67	28	6	28	13	103	2.17	3.68	4.14
1967-68	49	16	49	45	188	2.81	3.84	4.76
1968-69	80	9	80	22	311	2.44	3.89	4.16
1969-70	66	19	66	52	249	2.74	3.77	4.56
1970-71	54	11	54	35	191	3.18	3.54	4.18
1971-72	42	7	42	17	153	2.43	3.64	4.05
1972-73	75	12	75	36	258	3.00	3.44	3.92
1973-74	70	14	70	54	247	3.86	3.53	4.30
1974-75	87	21	87	52	312	2.48	3.59	4.18
1975-76	44	15	44	45	161	3.00	3.66	4.68
1976-77	56	18	56	53	210	2.94	3.75	4.70
1977-78	48	13	48	32	167	2.46	3.48	4.14
1978-79	60	20	60	43	214	2.15	3.57	4.28
1979-80	73	28	73	71	253	2.54	3.46	4.44
1980-81	54	24	54	54	179	2.25	3.31	4.31
1981-82	75	31	75	75	269	2.42	3.59	4.59
Total or 27-yr Mean	1,545	469	1,545	1,221	5,503	2.61	3.56	4.35

^a Presumably from the previous breeding season.

^b Presumably from the most recent breeding season.

Table 5. Mean body weights (lb) of male raccoons weighed at Perardi Bros. Fur and Wool Co., Inc., Farmington, Illinois.

Season	Young-of-the-year	Adults	All Males	All Raccoons
1955-56	10.86 (34) ^a	15.92 (20)	12.74 (54)	11.76 (97)
1956-57	11.50 (128)	15.96 (59)	12.90 (187)	12.39 (322)
1957-58	12.15 (59)	18.25 (16)	13.45 (75)	12.78 (155)
1958-59	11.21 (108)	16.12 (49)	12.74 (157)	12.13 (280)
1959-60	11.07 (149)	15.98 (56)	12.41 (205)	11.92 (411)
1960-61	11.23 (153)	17.15 (88)	13.39 (241)	12.64 (496)
1961-62	11.12 (255)	15.59 (153)	12.80 (408)	12.23 (765)
1962-63	11.46 (350)	17.19 (128)	13.00 (478)	12.45 (911)
1963-64	10.43 (70)	16.21 (51)	12.86 (121)	12.20 (232)
1964-65	10.99 (176)	16.44 (62)	12.41 (238)	11.86 (484)
1965-66	11.48 (178)	16.15 (106)	13.22 (284)	12.53 (558)
1966-67	11.56 (104)	17.09 (55)	13.47 (159)	12.53 (303)
1967-68	12.26 (152)	16.68 (64)	13.57 (216)	12.94 (399)
1968-69	11.57 (181)	16.90 (80)	13.26 (260)	12.65 (511)
1969-70	11.27 (211)	15.34 (80)	12.39 (291)	11.81 (535)
1970-71	12.45 (204)	17.96 (60)	13.70 (264)	13.06 (512)
1971-72	12.29 (140)	17.24 (52)	13.63 (192)	12.91 (374)
1972-73	11.27 (188)	15.59 (96)	12.73 (284)	12.16 (573)
1973-74	11.38 (213)	15.39 (76)	12.43 (289)	12.16 (507)
1974-75	11.24 (194)	15.75 (106)	12.83 (300)	12.18 (583)
1975-76	11.42 (155)	16.49 (60)	12.84 (215)	12.14 (396)
1976-77	10.61 (188)	16.17 (77)	12.23 (265)	11.58 (502)
1977-78	10.32 (195)	16.30 (91)	12.22 (286)	11.45 (541)
1978-79	10.12 (155)	17.20 (72)	12.36 (227)	11.92 (470)
1979-80	10.39 (166)	17.86 (78)	12.78 (244)	12.30 (500)
1980-81	11.56 (176)	17.44 (82)	13.43 (258)	13.04 (483)
1981-82	11.25 (156)	16.97 (80)	13.19 (236)	12.77 (457)
27-year Mean	11.28 (4,439)	16.48 (1,997)	12.89 (6,436)	12.31 (12,358)

^a Numbers in parentheses indicate sample sizes.

Table 6. Mean body weights (lb) of female raccoons weighed at Perardi Bros. Fur and Wool Co., Inc., Farmington, Illinois

Season	Young-of-the-year	Parous	Nulliparous Adults	All Females
1955-56	9.24 (25) ^a	12.32 (18)	(0)	10.53 (43)
1956-57	10.68 (85)	13.47 (39)	12.86 (11)	11.66 (135)
1957-58	11.33 (56)	14.16 (21)	13.21 (3)	12.14 (80)
1958-59	10.79 (96)	13.71 (23)	11.14 (4)	11.35 (123)
1959-60	10.40 (137)	13.74 (58)	12.28 (11)	11.44 (206)
1960-61	10.53 (175)	15.03 (77)	13.38 (3)	11.92 (255)
1961-62	10.76 (237)	13.25 (102)	12.81 (18)	11.57 (357)
1962-63	10.64 (287)	14.28 (125)	13.86 (21)	11.84 (433)
1963-64	10.39 (72)	13.88 (31)	11.85 (8)	11.47 (111)
1964-65	10.25 (174)	13.84 (57)	14.42 (15)	11.34 (246)
1965-66	10.48 (178)	14.34 (88)	13.82 (8)	11.82 (274)
1966-67	10.74 (108)	14.08 (28)	12.55 (8)	11.49 (144)
1967-68	11.13 (123)	14.72 (49)	13.10 (11)	12.21 (183)
1968-69	11.08 (161)	14.01 (80)	12.60 (9)	12.07 (250)
1969-70	10.03 (159)	13.44 (68)	12.06 (17)	11.12 (244)
1970-71	11.31 (176)	15.04 (54)	14.90 (18)	12.38 (248)
1971-72	11.12 (122)	14.79 (45)	12.65 (15)	12.16 (182)
1972-73	10.19 (181)	14.12 (90)	13.20 (18)	11.60 (289)
1973-74	10.71 (131)	13.86 (72)	11.33 (15)	11.79 (218)
1974-75	10.22 (179)	13.89 (88)	12.22 (16)	11.48 (283)
1975-76	10.42 (129)	13.62 (41)	13.19 (11)	11.31 (181)
1976-77	9.81 (167)	13.69 (59)	11.45 (11)	10.85 (237)
1977-78	9.69 (188)	13.08 (49)	13.21 (18)	10.59 (255)
1978-79	9.74 (154)	14.97 (61)	13.63 (28)	11.50 (243)
1979-80	10.47 (177)	14.99 (73)	14.40 (6)	11.85 (256)
1980-81	11.30 (151)	15.53 (55)	14.25 (19)	12.58 (225)
1981-82	10.61 (125)	14.53 (78)	14.52 (17)	12.30 (220)
Total or 27-yr Mean	10.52 (3,953)	14.09 (1,629)	12.92 (339)	11.64 (5,921)

^a Numbers in parentheses indicate sample sizes.

Table 7. Average values and numbers of Illinois raccoon pelts, from 1968-69 through 1981-82. ^a

Season	Average Value	Average Number Harvested
1968-69	\$ 3.11	49,429
1969-70	2.44	62,949
1970-71	1.35	52,866
1971-72	2.95	68,174
1972-73	5.37	85,536
1973-74	7.36	181,776
1974-75	8.03	No Data
1975-76	14.00	310,593
1976-77	17.17	187,377
1977-78	18.00	237,315
1978-79	27.25	292,728
1979-80	25.50	381,006
1980-81	19.40	314,777 (Hubert 1981)
1981-82	22.50	314,963 (Hubert 1982) ^b

^a Data from Sanderson and Hubert (1980), except as noted.

^b Preliminary figures.

Table 8. Average body weights (lb) of raccoons killed by hunters, trappers, and roadkills and examined at Perardl Bros. Fur and Wool Co., Inc., Farmington, Illinois--1972-73 and 1974-75 through 1981-82.

Season	Juvenile Males			Adult Males			Juvenile Females		
	Hunters	Trappers	DOR	Hunters	Trappers	DOR	Hunters	Trappers	DOR
1972-73	11.31 (113)	11.21 (36)	14.90 (2)	15.65 (60)	15.57 (23)	15.55 (2)	9.93 (112)	10.58 (41)	10.80 (1)
1974-75	11.24 (91)	11.40 (32)	12.50 (1)	15.71 (49)	14.99 (15)	14.95 (2)	10.46 (83)	10.14 (24)	10.30 (4)
1975-76	11.44 (120)	10.93 (34)	8.70 (1)	16.57 (45)	16.14 (14)	17.00 (1)	10.17 (90)	11.01 (35)	(0)
1976-77	10.76 (154)	9.99 (33)	11.20 (1)	16.30 (67)	15.12 (9)	15.60 (1)	9.88 (139)	9.56 (27)	7.77 (3)
1977-78	10.31 (183)	10.58 (28)	8.65 (6)	16.30 (74)	14.54 (17)	(0)	10.56 (116)	7.82 (45)	10.88 (4)
1978-79	10.02 (117)	10.15 (32)	10.00 (1)	17.43 (56)	16.37 (11)	17.45 (2)	9.64 (113)	9.67 (29)	9.74 (5)
1979-80	10.49 (128)	10.12 (33)	8.18 (4)	18.00 (66)	16.95 (12)	(0)	10.56 (138)	9.92 (37)	7.70 (1)
1980-81	11.78 (137)	11.37 (34)	9.95 (4)	17.49 (69)	17.14 (13)	(0)	11.29 (109)	11.31 (37)	10.98 (4)
1981-82	11.41 (119)	10.79 (36)	9.40 (1)	17.05 (64)	17.37 (15)	12.80 (1)	10.69 (96)	10.55 (31)	0.00 (0)
Mean of Means	10.97	10.72	10.39	16.72	16.03	15.56	10.35	10.06	9.74

Season	Parous Females			Nulliparous Adult Females			All Raccoons		
	Hunters	Trappers	DOR	Hunters	Trappers	DOR	Hunters	Trappers	DOR
1972-73	13.67 (51)	14.86 (30)	(0)	12.74 (17)	14.65 (4)	(0)	12.01 (353)	12.69 (134)	14.34 (5)
1974-75	13.85 (40)	13.64 (18)	13.00 (1)	12.09 (8)	12.00 (3)	(0)	12.22 (271)	12.12 (92)	12.08 (8)
1975-76	13.78 (35)	13.02 (7)	(0)	12.49 (10)	14.30 (1)	(0)	12.14 (300)	11.96 (91)	12.85 (2)
1976-77	13.56 (54)	12.65 (11)	12.70 (2)	11.92 (7)	9.63 (3)	(0)	11.73 (421)	10.74 (83)	10.78 (7)
1977-78	12.94 (40)	13.91 (9)	13.30 (1)	13.28 (13)	12.88 (4)	(0)	11.94 (426)	10.42 (103)	8.67 (11)
1978-79	14.94 (45)	14.45 (13)	(0)	13.12 (23)	15.98 (5)	(0)	11.90 (354)	11.70 (90)	11.70 (8)
1979-80	14.87 (50)	15.20 (23)	(0)	14.98 (5)	15.00 (2)	(0)	12.42 (387)	12.00 (107)	8.08 (5)
1980-81	15.66 (42)	15.12 (13)	(0)	14.05 (13)	14.68 (6)	(0)	13.41 (370)	12.80 (103)	10.46 (8)
1981-82	14.50 (49)	14.57 (29)	(0)	15.34 (11)	13.00 (6)	(0)	12.84 (339)	12.62 (117)	11.10 (2)
Mean of Means	14.20	14.16	13.00	13.33	13.57		12.29	11.89	11.12

Table 9. Percentage of raccoons killed by hunters, trappers, and cars and brought into Perardl Brco. Fur and Wool Co., Inc., Farmington, Illinois, 1972-73 and 1974-75 through 1981-82 seasons.

Season	All Raccoons			Parous Females			Juvenile Females		
	Hunters	Trappers	DOR	Hunters	Trappers	DOR	Hunters	Trappers	DOR
1972-73	70.93 (349)	28.05 (138)	1.02 (5)	62.82 (49)	37.18 (29)	0.00 (0)	68.10 (111)	31.29 (51)	0.61 (1)
1974-75	72.66 (271)	25.20 (94)	2.14 (8)	69.84 (44)	28.57 (18)	1.59 (1)	72.17 (83)	24.35 (28)	3.48 (4)
1975-76	76.39 (317)	23.13 (96)	1.61 (2)	80.44 (37)	19.57 (9)	0.00 (0)	73.68 (98)	26.32 (35)	0.00 (0)
1976-77	82.90 (417)	15.51 (78)	1.59 (8)	84.06 (58)	11.59 (8)	4.35 (3)	81.88 (131)	16.25 (26)	1.88 (3)
1977-78	80.85 (439)	16.94 (92)	2.21 (12)	80.00 (40)	18.00 (9)	2.00 (1)	79.38 (154)	18.56 (36)	2.06 (4)
1978-79	78.65 (361)	19.61 (90)	1.74 (8)	76.79 (43)	23.22 (13)	0.00 (0)	76.82 (116)	19.87 (30)	3.31 (5)
1979-80	76.60 (383)	22.40 (112)	1.00 (5)	68.49 (50)	31.51 (23)	0.00 (0)	78.41 (138)	21.02 (37)	0.57 (1)
1980-81	76.46 (367)	21.67 (104)	1.88 (9)	76.36 (42)	23.64 (13)	0.00 (0)	72.00 (108)	24.67 (37)	3.33 (5)
1981-82	73.85 (336)	25.71 (117)	0.44 (2)	62.82 (49)	37.18 (29)	0.00 (0)	75.40 (95)	24.60 (31)	0.00 (0)
Mean of Means	76.59	22.02	1.51	73.55	25.61	0.88	75.32	22.99	1.69

Season	Adult Males			Juvenile Males			Nulliparous Adult Females		
	Hunters	Trappers	DOR	Hunters	Trappers	DOR	Hunters	Trappers	DOR
1972-73	70.24 (59)	27.38 (23)	2.38 (2)	77.40 (113)	21.23 (31)	1.37 (2)	80.95 (17)	19.00 (4)	0.00 (0)
1974-75	74.24 (49)	22.73 (15)	3.03 (2)	75.21 (91)	23.97 (29)	0.83 (1)	50.00 (4)	50.00 (4)	0.00 (0)
1975-76	76.39 (317)	23.13 (96)	0.48 (2)	77.02 (124)	22.36 (36)	0.62 (1)	84.62 (11)	15.38 (2)	0.00 (0)
1976-77	88.46 (69)	10.26 (8)	1.28 (1)	81.82 (153)	17.65 (33)	0.53 (1)	71.43 (5)	28.57 (2)	0.00 (0)
1977-78	82.10 (78)	17.89 (17)	0.00 (0)	82.38 (159)	13.99 (27)	3.63 (7)	72.73 (8)	27.27 (3)	0.00 (0)
1978-79	81.16 (56)	15.94 (11)	2.90 (2)	78.29 (119)	21.05 (32)	0.66 (1)	84.62 (22)	15.38 (4)	0.00 (0)
1979-80	83.54 (66)	16.46 (13)	0.00 (0)	75.30 (125)	22.29 (37)	2.41 (4)	66.67 (4)	33.33 (2)	0.00 (0)
1980-81	84.15 (69)	15.85 (13)	0.00 (0)	77.97 (138)	19.77 (35)	2.26 (5)	62.50 (10)	37.50 (6)	0.00 (0)
1981-82	79.45 (63)	18.99 (15)	1.26 (1)	76.28 (119)	23.08 (36)	0.64 (1)	62.50 (10)	37.50 (6)	0.00 (0)
Mean of Means	79.97	18.74	1.26	77.93	20.60	1.44	70.67	29.32	0.00 (0)

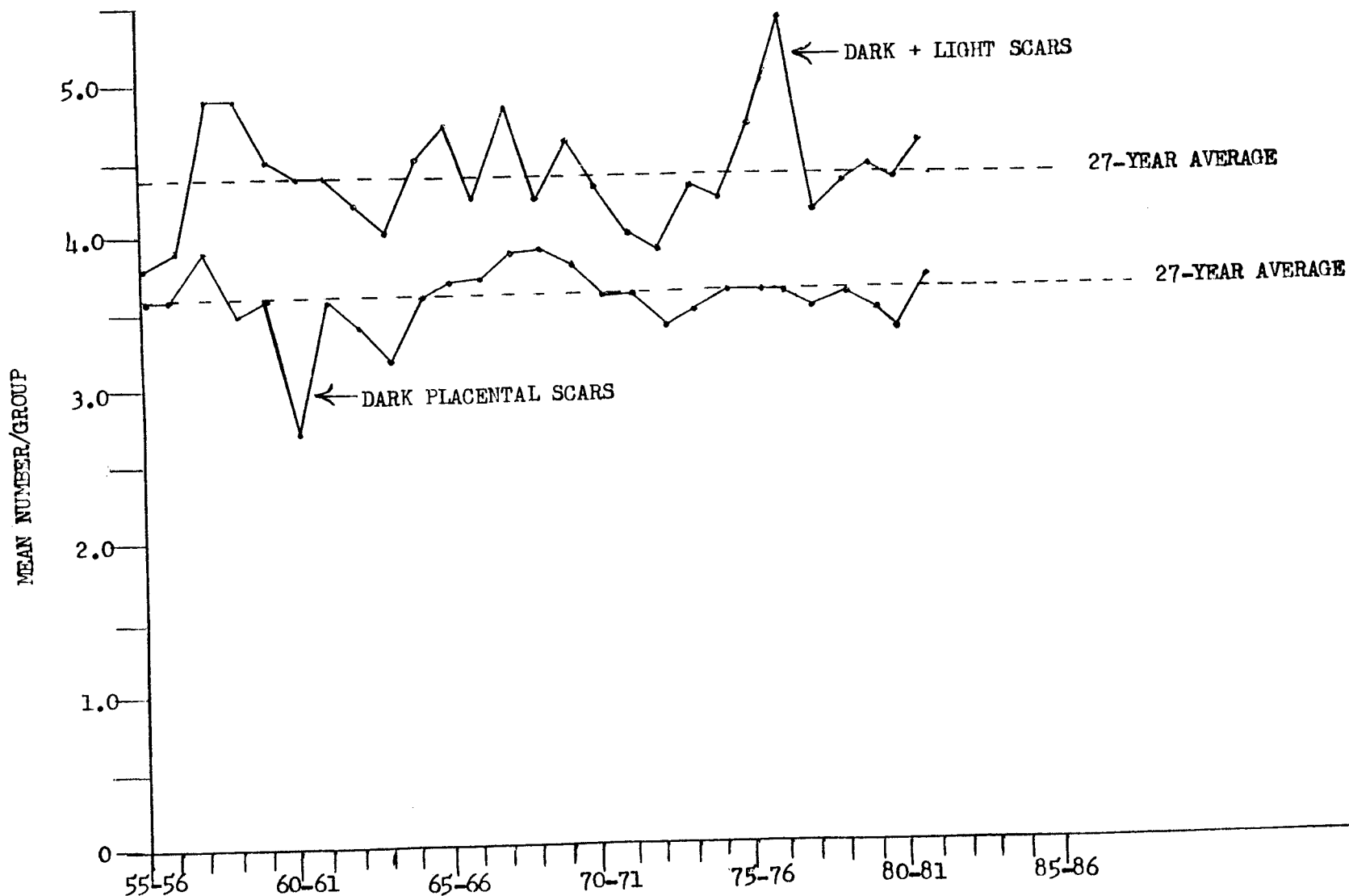


Fig. 1. Average number of placental scars observed per parous female examined at Perardi Bros. Furhouse, Farmington, Illinois--1955-56 through 1981-82 seasons. "Dark" scars represent uteri with only one group of scars whether dark or light and the dark scars when both light and dark scars were present in the same uterus; the "dark + light scars" represent all scars visible in the uterus of a parous female. The average number of "dark" scars is believed to represent the average litter size.